



TEC-MASTERS, INC.

# **FINAL TECHNICAL REPORT**

**15 January 1993**

**CONTRACT TITLE:  
NASA PPO MICROGRAVITY PROJECTS SUPPORT**

**CONTRACT NO:  
NAS8-38778**

**TASK ORDER 003  
PPO Microgravity Experiment Support**

**CONTRACTOR:**

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## **FINAL TECHNICAL PROGRESS REPORT - TASK ORDER 003**

NASA Payloads Project Office (PPO)  
Microgravity Experiments Projects (MEP) Support

Contract Number: NAS8-38778  
Task Order 003

Tec-Masters, Incorporated (TMI) is pleased to submit this final report for the above referenced Task Order 003.

### **Subtask 1 - Flight Experiment Definition Support**

An in-depth study was performed to evaluate a new European designed Borack Freezer/Cooler for possible Shuttle Middeck flight to support Advanced protein Crystal Growth (APCG) experimentation. Findings of this evaluation were compiled into a comprehensive report entitled, "Investigation of IML-2 Freezer/Cooler for Possible Shuttle Middeck APCG Experiment Utilization," dated August 1992 and delivered to the requester, Ms. Blair Herren.

### **Subtask 2- Glovebox/FES Support**

At the request of Mr. Rudy Ruff a draft Statement of Work (SOW) was prepared for the design and development of a Glovebox for proposed flight in the shuttle middeck. This detailed draft SOW was completed and delivered to the requester in August 1992. Work was also initiated, at the request of Mr. Ruff, to perform an analysis of low-g accelerometer data relative to Fluid Experiment System (FES) experiment operations on the IML-1 mission. This work was undertaken in an effort to determine if abnormal low-g accelerations during the mission were responsible for anomalies which occurred during FES/Triglycine Sulfate (TGS) experiment operations. Due to funding limitations, all data analysis effort under this task was terminated and transferred to Task Order 006 at the direction of NASA.

### **Subtask 3 - GFFC Re-certification Support**

At the request of Mr. Gerald Hall, a comprehensive review was made on a revised edition of the Geophysical Fluid Flow Cell (GFFC) Operations and Maintenance (O&M) Manual. results of the review were compiled into a detailed report and delivered to the requester for his use and consideration.

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